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ABSTRACT

This document outlines a workshop for media specialists--"School Library Automation: Solving the Puzzle"--that is designed to reduce automation anxiety and give a broad overview of the concerns confronting school library media centers planning for or involved in automation. Issues are addressed under the following headings: (1) Levels of School Library Media Services; (2) Planning (functions of library automation, needs assessment; (3) Database Creation (standardization, weeding, inventory and shelf list, retrospective conversion); (4) Software Selection; (5) Hardware Selection; (6) Installation; (7) Operation and Maintenance; and (8) Developing a Statewide Database (project, rationale, obligations, and implementation). A checklist for a building-level media center profile to help decision-makers choose whether or not to automate is included, as well as a collection of 28 masters for overhead transparencies to be used in presenting the workshop. (29 references) (DB)

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Automation of Oklahoma School Library Media Centers

Automation at the Local Level

ED330328

Oklahoma
State Department of Education
Gerald E. Hoeltzel
State Superintendent
of Public Instruction

1990

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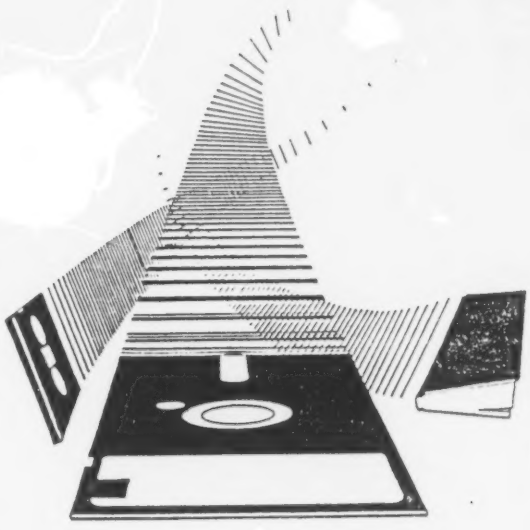

Prepared by

Library Resources/Technology Section

1990

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Library Resources/Technology Section

Barbara Spriestersbach, Director
John McGrath, Assistant Director
Bettie Estes-Rickner, Coordinator
Betty Riley, Coordinator
Carol Casey, Coordinator
Kathleen Curran, Secretary
Toni Pool, Secretary

Special Assistance

Paula Krivanek, Word Processing
Janet Douglas, Word Processing
Ginger DiFalco, Word Processing
David Barrow, Cover Design
Mark Raidt, Data Services
Ken Carmichael, Data Services

The following library media specialists in Oklahoma schools contributed to the development of this plan:

Vicki Stewart, Bartlesville
Jeanie Johnson, Lukfata
Carolyn O'Brien, Choctaw
Pat Davis, Enid
Lou Nelson, Guymon
Linda Gann, Jenks
Pat Kardaleff, Lawton
Barbara Rather, Tulsa Union
Karen Williams, Stillwater
Norma Dreyer, Tulsa

Oklahoma State Department of Education
Gerald E. Hoeltzel
State Superintendent of Public Instruction
Oklahoma City, Oklahoma

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AUTOMATION AT THE LOCAL LEVEL

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AUTOMATION AT THE LOCAL LEVEL

Introduction

Many issues confront Oklahoma school library media centers today. There are such traditional concerns as censorship and stretching the budget, but recently a new anxiety has surfaced involving automation of the school library media center.

These questions are not uncommon regarding library media center automation:

Is it for me?

Where do I start?

Where do I stop?

How do I get it right the first time?

The intent of this workshop is to reduce your automation anxiety and help you solve the automation puzzle by giving a broad overview of the possibilities available and the concerns confronting school library media centers regarding automation.

The decision to automate always involves risks. School library media centers face concerns which are not associated with larger academic or public libraries. These concerns are broadly based on 1) the nature of the technology, 2) the nature of the marketplace, and 3) the nature of small libraries.

1. The nature of the technology:

   -- Many people falsely assume that microcomputers have much greater power and speed than they actually have.

   -- Because of the limitations imposed by the technology of the microcomputer, many software programs lack the sophistication and wide-ranging functions possible in larger computer systems.

   -- Microcomputers were initially designed to run one software program at a time and to be used by one person at a time. To implement both a circulation system and an on-line catalog places additional burdens on the hardware and creates another level of complexity that must be addressed.

   -- Because of the multitude of hardware options available, it can be difficult to know the limitations or potential compatibility problems inherent in any specific hardware configuration.

   -- It is very difficult to keep up with the rapidly changing hardware technology.

2. The nature of the marketplace:

   -- Librarians must cope with the fact that vendors come and go.

   -- Vendors of micro-based systems seldom sign contracts with libraries. This leads to misunderstandings over the obligations and responsibilities of the library vs. the vendor.

- There are very few vendors that supply both hardware and software which is common with most vendors of minicomputer systems. This causes problems in having to work with several vendors throughout the life-cycle of the automated system.

- Many vendors do not have national sales representatives who can demonstrate their product in person. Demo disks are often deceptive.

- It is imperative that you make sure that any product selected supports the Library of Congress MARC (MAchine Readable Cataloging) record format to store the library's cataloging data. This has major implications for a library's current and future automation efforts.

- Hardware manufacturers seldom provide technical support for their microcomputers. This support is provided through a local dealer and can vary substantially.

3. The nature of small libraries:

   - Small libraries simply have less staff than large libraries to allocate for planning, selecting, and implementing an automated system.

   - Small library staff often have less opportunity to attend workshops and continuing education programs on library automation or attend conferences where automation programs are presented and vendors are exhibiting their circulation and catalog software.

   - Small libraries lack funds to contract with a consultant to assist them in their automation planning and system selection.

   - Some people have difficulty switching from the familiar Apple microcomputers to the IBM PCs which are often mandated by new library management software programs.

Regardless of size, libraries considering automation also must face the following realities.

1. **Library automation is disruptive.** Thorough planning must precede actual implementation of a system, but unforeseen issues often cause problems (hardware difficulties, software glitches, etc.).

2. **Library automation takes time.** Time must often be found within the context of the staff's other multiple responsibilities. Flexible scheduling is essential to accommodate any delays that may occur.

3. **Library automation is complex.** Evaluation of automated systems is essential, but time consuming and also very detail oriented. Matching your library's needs with available software is extremely important.

4. **Library automation demands a commitment.** The librarian must be totally committed to assuming the additional responsibilities and workload associated with automating the circulation system and/or catalog, and must have the support of the administration and staff.

5. **Library automation requires careful planning.** A major concern that librarians have is selecting the wrong hardware or software, and then realizing after it is operational that the system does not do what they thought it would do. This is often the result of inadequate

planning and concentrating only on short-term objectives and failing to consider long-term needs.

These cautions and warnings must not be taken as a deterrent to automating your library. Rather, they should be used as a guideline to assist you in avoiding some of the common problems and obstacles that libraries often encounter in the automation process.

Automation in a library media center is generally regarded as the application of computer technology to a specific task. Automation of the school's library media program may be something that is not undertaken, but it must be considered as short- and long-range goals are developed. Automation requires school library media specialists to rethink traditional services and the provision of new services as they are faced with the complex challenge of expanding access to increasing amounts of information. In developing short and long range goals, first determine the library's level on the library media services continuum.

Levels of School Library Media Services

Level 1 (No involvement or cooperation)

General Description - The library exists as a separate and independent institution either by choice or by lack of any precedent for cooperation. Automation and technology are limited to traditional audio-visual materials and equipment to supplement the curriculum.

Characteristics - There has been no history of cooperation. Formal contacts have not been made between schools or other institutions. There may be no public library in the region. There are no library media personnel in the school or school system. There is no telephone in the school library media center. There are no satellite receivers or microcomputers in the school.

Level 2 (Informal cooperation)

General Description - Libraries are still quite independent entities but experience sporadic cooperation. Some libraries may cooperate more than others but all still rely primarily on their own resources to satisfy user needs.

Characteristics - Assignment alerts are given to public librarians by the school library media specialist. Telephones are available in school library media centers for reference service by either school or public librarians. Joint publicity is used for special library events. A microcomputer is located in the school library and used for limited simple administrative tasks and classroom computer assisted instruction.

Level 3 (Formal communication)

General Description - Communication becomes more purposeful and ongoing in nature, focusing on a specific event or issue. Library staffs may meet together on an irregular basis. Microcomputers in school library media centers are being used for circulation, administrative tasks, and student production (word processing, desktop publications, etc.). Isolated schools use satellite broadcasting to expand curriculum.

Characteristics - Class visits to the public library are scheduled. Public librarians visit the school library media center or school classrooms. Summer programs for children are mutually planned and promoted. Contact between librarians is established through professional

associations or workshops. Collections are inventoried and weeded. Shelf lists are updated to include the LCCN or the ISBN. Instruction in the use of automation is integrated into the school's curriculum. Computers, televisions, satellite networks are purchased to meet demand. Facility renovations are made to accommodate new technologies.

Level 4 (Formal cooperation)

General Description - Mutual goals or objectives guide the cooperative activities of libraries. Though actual materials may not be exchanged, there is an increased awareness of the region's total information resources. Databases are developed. Patrons have access to automated catalogs. Library staffs and administrators have an understanding of the services and missions of the other libraries involved in the regional group.

Characteristics - Joint celebration of library events such as National Library Week are planned. Computerized databases of union lists of periodicals and/or AV materials are developed. Bibliographies are exchanged. Cooperative data collection is initiated.

Level 5 (Resource sharing)

General Description - Cooperation becomes more planned, systematic, and ongoing as the commitment to expanded library service grows. Involvement of school administrators, town fiscal agents, trustees, etc., increases because many resource sharing activities involve policies or finances. Short- and long-range regional planning is occurring.

Characteristics - Shared story-telling, book talks, discussion groups, etc., are planned. Loan of school materials to public library during the summer is initiated. School library media materials are available to other schools and public libraries. Compatibility of hardware (video, microcomputer, etc.) throughout the region is sought. Shared display of special materials or projects is developed. Mutual exchange of materials of any kind and intradistrict delivery of the materials to all libraries and library media centers in the region is established. Regular articles in school or local newspapers, library bulletins, etc., are jointly planned and distributed.

Level 6 (Formal planning)

General Description - Cooperation exists on a frequent and regular basis and involves more people. Short- and long-term goals and objectives for library service are developed and approved by the appropriate governing boards. Libraries are fully automated and include on-line services.

Characteristics - Regional libraries and library media centers are involved in cooperative activities such as:

1. Collection development
2. Policy development (selection, weeding, equipment, etc.)
3. Joint cataloging/technical processing
4. Equipment repair, service or purchase programs
5. Shared goal setting for library service within the region
6. Shared program evaluation procedures
7. Exchange of current acquisitions
8. Common automated catalog (CD-ROM, on-line database, etc.)
9. Facilities sharing for district patron services
10. Extended hours at the school library media center to increase patron access.

In Oklahoma, library media centers can be found at any place on this continuum. It is important for each library to determine through long-range planning what is needed to assure future patron access to all information sources.

Long-Range Plan

Because an automation plan must be developed within the framework of the overall long-range plan for the library media center, reexamining that plan and bringing it up to date is a necessary first step in planning for automation. If no long-range plan exists, one can be developed at the same time the automation plan is written.

The long-range plan identifies why the library media center exists, where it is now, and where it is going. This plan should also include the mission statement based on the district's educational philosophy, current status, and the long-range goals.

Goals, objectives, and activities are developed from needs assessments in the areas of 1) library administration, 2) personnel, 3) programs, 4) resources, 5) equipment, and 6) facilities. (See *Procedures Manual For School Library Media Centers*, Oklahoma State Department of Education, 1986, p. 181).

Automation Plan

A local automation plan should help clarify each library media center's goals for future development and automation. If individual library media centers determine through long-range planning that upward movement on the library media service continuum is desirable, the following steps need to be taken in automating a K-12 library media program:

I. Planning:

A. Consider library automation functions as a means of achieving long-range goals.

1. **Library management functions** for libraries where computers are available for staff and patron use can be performed by software which is either task-specific or multipurpose. Task-specific software is generally developed to do only one task, such as printing overdue notices. Multi-purpose software typically includes word processing, database, and spreadsheet applications that can be utilized separately or as integrated programs. Some multipurpose software also includes graphics capability.

Task-Specific Software:

a. Overdue notices
b. Catalog cards
c. Bibliographies
d. Graphics

Multi-Purpose Software:

a. **Word Processing** (text-oriented tasks)
   - correspondence
   - form letters and requests
   - handbooks and policy statements
     - selection policy
     - user manuals
     - procedure guides
   - purchase orders
   - bibliographies

b. **Database** (sorting tasks)
   - inventory
   - hardware/software bookings
   - processing periodicals
   - consideration files/book orders
   - bibliographies

c. **Spreadsheet** (number tasks)
   - budget
   - fund accounting
   - circulation/library statistics
   - orders (especially supply)
   - sign-in sheets and other numbered lists

2. **Collection management functions** in libraries can be performed either by individual software programs or within an integrated system. For example, one library may purchase an individual software program to perform circulation management while another library may purchase an integrated system that performs circulation, on-line public access catalog, acquisitions, serials control, etc. Whatever decision is made, each automated program should meet certain criteria.

Circulation Software Evaluation Checklist

a. Data entry (patrons and titles)
   - error checking
   - batch entry
   - downloading ability

b. Check out
   - scanner and keyboard
   - error checking
   - holds for overdues
   - reserves

c. Check in
   - flags reserves
   - flags and calculates fines
   - pauses for verification of fines, reserves, etc.

d. Update student and title information
   - global delete of students
   - automatically removes reserves
   - easy update of location
   - download title information from a vendor

e. Search capabilities
   - by title/students/barcodes
   - by partial or exact match
   - window access

f. Reports and printouts
   - overdues
   - lists
   - mailing
   - fines
   - reserves
   - Rolodex cards
   - collection and circulation reports

g. Inventory
   - scanner
   - keyboard

h. Backup options
   - floppies
   - tape

i. Customer support and service
   - toll-free number
   - maintenance agreement and fees
   - updates
   - newsletter

j. Training
   - cost
   - on-site training seminars
   - ongoing training seminars

Catalog Software Evaluation Checklist

a. Searchable fields
   - title
   - author
   - subject
   - series title
   - editor
   - illustrator
   - date
   - call number
   - ISBN and/or LCCN
   - access/barcode number
   - publisher
   - content note

b. Searching capabilities
   - phrase searching by exact author/title/subject fields
   - keyword searching in author/title/subject fields
   - boolean searching
   - truncation capabilities
   - authority control
   - forward/backward browsing through author/title/subject lists
   - ability to stop/restart a search at anytime
   - ability to modify/limit a search by date, material type, etc.

c. Input/delete capabilities

d. Security levels

e. Display capabilities

f. Report/print capabilities

Evaluation checklists for additional collection management functions (i.e., serials control, acquisitions, etc.) and integrated systems are available.

3. **Information access functions** give patrons a search tool that does not depend on years of library background and experience to access information and resources immediately available or readily available on interlibrary loan. Multi-library networking offers to members various cataloging and interlibrary loan services as well as union catalog products that are either online or in CD-ROM format. Online or CD-ROM format also offers other resources such as encyclopedias, periodical indexes, and dictionaries.

B. Conduct an automation needs assessment

Building-Level Media Center Profile

Patron Cluster

1. Grade levels of patrons

   P K 1 2 3 4 5 6 7 8 9 10 11 12

2. Number of patrons

   administrators _____ teachers _____
   students _____ support staff _____

3. Anticipated changes in next 3 to 5 years

   grade levels _____
   class size _____
   staff/curriculum _____

Staff Cluster

1. Total FTE

   professional staff _____ clerical staff _____
   volunteers _____ student aides _____

Collection Cluster

1. Number of volumes _____ periodical titles _____ AV titles _____

2. Number of new titles added per year _____

3. Anticipated changes in curriculum in the next 3 to 5 years:

Records/Reports

	frequency	annual total
1. Circulation reports	_____	_____
2. Accreditation reports	_____	_____
3. Overdue records	_____	_____
4. Budget reports	_____	_____
5. Consideration file	_____	_____
6. Inventory report	_____	_____
7. Schedules	_____	_____
8. Other _____	_____	_____

Service Cluster

1. Number of catalog searches per week _____
2. Number of interlibrary loan requests per week _____
3. Number of reference questions per week _____
4. Bibliographies completed annually _____

Special Considerations

1. Average time spent on the following tasks per week:

_____ student/teacher reserves

_____ circulation restrictions

_____ cataloging

_____ tracking lost books

_____ developing and revising lesson plans

_____/_____ maximum circulation per hour/per day

_____ student withdrawals

_____ generation of reports

From your long-range plan, (refer to page 7) list at least three major goals:

1.

2.

3.

List at least three major problem areas in your media center as determined by the profile:

1.

2.

3.

Based on goals listed, answer the following for each goal:

MAJOR GOAL	Can automation accomplish this task faster, more efficiently and more accurately?	Can automation aid patron access to information?	Can automation contribute to resource sharing?
1.			
2.			
3.			

If answers to the above are no, proceed to the next section on database creation. If the questions indicate a need for automation, consider the following:

MAJOR GOAL	Is there considerable repetitive work involved?	Is speed important?	Is accuracy important?
1.			
2.			
3.			

Based on problems listed, answer the following for each problem:

MAJOR PROBLEM	Can automation accomplish this task faster, more efficiently and more accurately?	Can automation aid patron access to information?	Can automation contribute to resource sharing?
1.			
2.			
3.			

If answers to the above are no, proceed to the next section on database creation. If the questions indicate a need for automation, consider the following:

MAJOR PROBLEM	Is there considerable repetitive work involved?	Is speed important?	Is accuracy important?
1.			
2.			
3.			

If you still want to automate, consider the following:

1. A good manual system is better than an automated one which is poorly planned and implemented.
2. Not every task worth doing is worth automating.
3. Automation almost never eliminates any jobs or saves money.
4. There may be problems during automation.
5. Automation takes time!

C. Investigate costs and timeline needed to accomplish automation objectives.

D. Form a district automation committee with the approval of the school administration to create a district plan based on building-level needs assessment.

E. Share the district plan with the administration and faculty.

F. Present the plan to the board of education for adoption.

II. Database creation:

Planning and implementing library automation is a long process. During this time while staff members are becoming familiar with computers and making decisions about automation, preparing the collection for retrospective conversion should begin. The process of converting the information from a paper catalog card shelf list to a computer readable format is called retrospective conversion. Even if there are no immediate plans for automation, preparation of the collection for retrospective conversion should be initiated now. Preparation includes standardization of the classifying process within the district or region, weeding as needed, taking inventory, and developing accurate shelf list cards with an entry for each holding.

A. Standardization

Standardization of the classifying process within the district or region will ensure a less costly, more accurate, and easier retrospective conversion procedure. MicroLIF disks or tapes should be purchased from the vendors when books are ordered and put aside for later retrospective conversion. Location headings such as B, BIO or 92 for biographies, Dewey Decimal places, and number of letters included in entries must be standardized to avoid improper placement of the materials within a computerized shelf list.

B. Weeding

The collection needs to be carefully examined and evaluated. If policies for weeding and inventory are not available, they should be written so that procedures are consistent. A smaller collection which is current, attractive, and used is a greater credit to the school than a large number of older books which tend to remain on the shelves because of poor format or content. The quality of the collection takes on greater importance when the cost of entering each title into a database is considered.

What to Weed:

1. Books of poor content such as outdated information.
2. Volumes of no use in your media center. Three to five years without circulating and the media specialist's knowledge that it has not been used in the media center for reference would probably warrant discarding.
3. Consider discarding if a title does not appear in at least one of the standard book selection aids.
4. Books of very poor appearance such as those with yellow, brittle, dirty or torn pages. Also discard those with dingy, dirty covers or whose antiquated appearance discourages use.
5. Books beyond the comprehension of the prospective reader.
6. Sets of textbooks and old textbooks unless single copies are to be used for reference.
7. Sets of readers should be returned to the classroom or other storage areas.
8. DO NOT discard books and materials on Oklahoma. Repair or send books to the bindery.

How to Weed:

1. **Discards which are not to be replaced** - card and pocket should be removed and ownership stamp marked over. (Consult with your school system on their policy of disposal.) Mark inside the cover of the book "Withdrawn, [year]." Remove shelf list card and cards from the card catalog.

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2. **Books to be replaced** - follow the same procedure as in #1 above except do not remove the catalog cards. Instead, place author, title, publisher, on a list of materials to order.
3. **Books to be bound** - See steps involved in "Sending Books to the Bindery," *Procedures Manual For School Library Media Centers* (Oklahoma State Department of Education, 1986, p. 152).
4. **Books to be mended** - See steps involved in "Repair of Print Materials," *Procedures Manual For School Library Media Centers* (Oklahoma State Department of Education, 1986, p. 152).
5. **Specific helps in weeding nonfiction** are found in the *Procedures Manual For School Library Media Centers* (Oklahoma State Department of Education, 1986, p. 156-7).

C. Inventory and Shelf List

When weeding and taking inventory, carefully examine the shelf list card for compliance with the book to be sure it includes:

- accurate citation information;
- ISBN or LCCN for each edition, paperback and hardcover copy;
- consistent Dewey numbers; numbers within the same classification must be extended to the same number of decimal points to avoid bar coding problems;
- consistent recording of author's last name and the biographee's last name to one, two, or three places (example: Blume = B or BL or BLU);
- standardized location headings (example: B, BIO or 92, F or FIC).

Inventory of materials should be done on a regular basis. See steps involved in "Inventory of Materials," *Procedures Manual For School Library Media Centers* (Oklahoma State Department of Education, 1986, p. 151).

D. Retrospective Conversion

The task of converting a paper catalog card shelf list to a form that a computer can read is so costly and time consuming you don't ever want to have to do it again for the same collection. Therefore, it is important that the information on your shelf list is put into a standard format. Since the 1960s that standard format has been MARC records. The term "MARC" stands for the phrase "**MA**chine-**R**eadable **C**ataloging Records." The Library of Congress originally devised this standard format to share cataloging information with libraries using large mainframe computers. Using MARC format for school library records enables that school to participate in future cooperative ventures with other types of libraries: i.e., school, public, academic, etc. Book vendors can also deliver MARC records on a disk with any new book ordered so that the information can be automatically added to your computerized card catalog. If you ever outgrow your system or your vendor goes out of business, you will be able easily to load your MARC records into any other system.

The machine-readable data can be on floppy disks or nine-track tapes. The data can then be put into a circulation system or a computerized catalog:

- mainframe computer
- microcomputer with hard disk
- microcomputer with a CD-ROM player

There are three ways of doing retrospective conversion:

- You do **all** the work on-site by entering all data from scratch or by matching against a CD-ROM database.

- You do **some** of the work on-site by entering ISBN or LCCN on batch disks or by using circulation records with ISBN or LCCN.

- You do **none** of the work on-site but send your paper shelf list to a vendor to match their database.

Conversion on-site is least expensive but takes considerable staff and time. Conversion done entirely by a vendor costs the most but requires the least staff and time.

When planning for retrospective conversion the following questions should be considered:

(See "Questions to Guide Retrospective Conversion Choices for School Library Media Centers," *School Library Media Quarterly*, Catherine Murphy, Winter, 1990, p.79)

About the Library...

1. What is the budget?
2. What size is the staff? Professional _____, Paraprofessional _____, Volunteers _____, Students _____.
3. What quality catalog records do you want to obtain? The minimum should be a full MARC record. Some vendors provide enhancements such as grade levels with the full MARC record.
4. How large is your collection?
5. What special features does your collection have?

About the Vendor...

1. What is your fee structure?
2. How many school retrospective conversions have you done?
3. How many catalog records are in your database or databases?
4. How many audiovisual records are in your database?
5. What enhancements are available in the database records?
6. How are records matched?
7. What is your school conversion hit rate?
8. What do you do with nonhits?
9. What is the error rate of the conversion?
10. Do you provide authority control?

III. Software selection:

Once the automation needs have been determined and approved, the next step is to select the software that best meets those needs. The following steps should be considered when selecting software:

1. Begin the software investigation process by reading current automation literature, investigating regional and state plans regarding automation, attending conference/workshop sessions and vendor exhibits, attending vendor demonstrations, and talking and/or visiting on-site with media specialists who have or are automating similar functions.

2. Send a request for information to vendors for the following information:

   a. Software warranty length & beginning date (ship date, invoice date, OR install date)?
   b. Formal software maintenance program including toll-free telephone number? Availability of toll-free number?
   c. Number/skill of technical support staff?
   d. Hours of technical support (east coast/west coast)?
   e. Cost of software upgrades?
   f. Number of operational systems in similar sized school library media centers/districts?
   g. Names/phone numbers of media specialists with system, preferably in your area?

   The financial stability and reputation of the vendor should be determined by answering the following questions:

   a. Do they understand libraries and their terminology?
   b. Years of experience with library programs?
   c. Range of services or functions offered?
   d. Size? (cottage industry vs. corporation)
   e. Primary market: schools, public libraries, academic libraries?
   f. Is sales representative knowledgeable and accommodating?

3. Prepare and complete a System Requirements Evaluation Checklist based on local needs to evaluate and narrow the field of prospective venders.

4. Seek funding for automation in the next year's budget based on estimated costs.

5. Prepare a Simplified Request for Proposal, and send to selected vendors.

6. Make a tentative software vendor selection using a combination of responses to the RFP (request for proposal), reputation of the vendor and customer support, ability to accept MARC records, cost, and other factors.

7. Make on-site visits to libraries with software performing the same functions with the tentatively selected vendor and determine the following:

   a. Why selected?
   b. Satisfaction?
   c. Problems experienced?
   d. Service from vendor?
   e. Compare the number of students, buildings, and collection size.

8. Make a final decision on the vendor and software to be purchased. Place the order including acceptance tests as agreed upon with the vendor. Draft an informal agreement listing vendor and client responsibilities.

IV. Hardware selection:

Select and order hardware, peripherals, and supplies to meet software specifications. The following steps should be considered when selecting hardware:

1. Obtain minimum and optimum hardware requirements from the vendor (Apple, IBM, and/or compatibles) based on software specifications.

   a. Type of disk operating system
   b. Type of microprocessor
   c. Speed of the microprocessor (MHz)
   d Amount of internal memory (RAM)
   e. Number and capacity of floppy drives (if any)
      (1) Capacity of floppy disk (double-sided, double density or double-sided, high density)
      (2) Number of disks for 1 year
      (3) Size (3 1/2 or 5 1/4)
   f. Size of hard disk drive for host (file server)
   g. Modem (if dial-up access is supported)
   h. Type of video interface (i.e. VGA, EGA, CGA)
   i. Type of printer(s) recommended
   j. Type of bar code reader(s) supported
   k. Type of bar code recommended

2. Length of warranty for each item of equipment?

3. Cost of hardware and peripherals?

4. Cost of on-site setup for hardware?

5. On-site maintenance agreement for equipment and cost?

6. Is local sales representative knowledgeable and accommodating?

7. Are technicians available for troubleshooting and questions?

8. What specific local area networks (LAN) are compatible with the vendor's programs? What specific LAN configuration is recommended?

9. Supports more than one user and performs more than one task simultaneously (multi user/multitask).

10. Maximum number of microcomputers that can **realistically** be installed on the LAN and used as catalog terminals based on the statistics provided and retaining a 5 second maximum response time for 90% of searches?

11. Data transfer rate (megabits/sec)?

12. Maximum distance between remote terminal(s) and host terminal?

13. Special physical conditions or power requirements needed to support the system?

14. Length of warranty on LAN?

15. Cost of LAN: software, cabling, junction boxes, drop cable, transporter card, etc.?

16. Who will install the LAN and cost?

17. Is LAN sales representative knowledgeable & accommodating?

18. Are technicians available for troubleshooting & questions?

19. Type of backup determined by number of patrons and size of collection:

    a. streaming tape drive
    b. internal or external
    c. storage capacity in megabytes

V. Installation:

Prepare the physical area for system installation with necessary wiring, lighting, telephone capabilities, security, etc. Contact your vendor regarding any special requirements. Plan for networking, traffic flow, workstation furniture, static control, and system expansion. When software and hardware arrive, the following steps should be taken:

1. Check shipments from all vendors for correct items and completeness.

2. Arrange for equipment set up and testing.

   If collection management automation is being installed, complete steps 3-12.

3. Arrange for training and installation of the module(s) on hard drive.

4. Decide upon system options and keep an automation decision log at each site.

5. Install LAN cables if applicable.

6. Fulfill vendor's preinstallation list: read manual, practice tutorial, have hardware in place, have necessary supplies, etc.

7. Perform retrospective conversion including barcode information if installing circulation module.

8. Barcode all items, if installing circulation module.

9. Install the program module(s) and LAN software if applicable, and load data into the hard drive.

10. Key-in patron data, or transfer patron data from the main office if installing circulation module.

11. Plan backup procedures.

12. Obtain full bibliographic records or key-in full bibliographic data for items not converted during retrospective conversion such as non-print materials.

13. Train staff and student assistants.

14. Test all functions. Conduct modified acceptance tests. Verify vendor has met all responsibilities. Accept the system if test results meet specs.

VI. Operation and Maintenance:

If collection management automation is installed, the following steps should be taken:

1. Introduce system to students and faculty.

2. Publicize the system to the community.

3. Edit records as necessary. Maintain the database with records entered, deleted, and revised.

4. Maintain a problem log as needed.

5. Evaluate and make necessary adjustments.

6. Continue the automation process as described in the long-range plans until all phases are completed.

The final steps in any long-range planning process includes reporting annually to the administration and board of education on progress towards the goals and objectives. The plan should be reviewed and revised annually to adjust to changing local conditions. The complete planning process should be repeated every five years.

DEVELOPING A STATEWIDE SCHOOL LIBRARY DATABASE

Establishing a statewide database of school library media center holdings will facilitate resource sharing and serve as a source of MARC (MAchine Readable Cataloging) records for local automation projects. Based on research conducted by the Pennsylvania Department of Education, a CD-ROM database will be the easiest to use and most cost-effective.

Rationale

The National Commission on Libraries and Information Science defines networking as "a formal arrangement whereby materials, information, and services provided by a variety of types of libraries and/or other organizations are made available to all potential users." (Woolls, 1986, p. 44.) Many school library media centers are currently involved in various types of informal resource sharing networks; however, emerging technology and shrinking budgets are forcing all types of libraries to rethink networking and resource sharing.

Developing a statewide database of school library media center holdings will facilitate resource sharing by accomplishing the following objectives:

- increase access to information for students and teachers.
- improve student's information skills.
- promote effective use of resources in school, public, and academic libraries.
- improve management of school library media centers.
- prepare school library media centers for participation in other networks to share resources.

In order to accomplish these objectives, information about school library media center collections must be recorded into a standard format which can be read electronically. This format is known as MARC. A CD-ROM disc is 4.72 inches in diameter and is capable of holding 250,000 pages of information or 540 to 600 megabytes of user data. It is produced by replicating a master disc which is initially expensive. Replication, however, is inexpensive especially when libraries join together to create the master disc. CD-ROMs are searched at the local level by using a microcomputer with a compact laser reader attached. This eliminates the high cost of telecommunications or searching on-line. The laser reader and microcomputer can also be used for other library functions. MARC records on a compact disc provide:

- a cost-effective method of access to a union catalog.
- a method of automating many time-consuming library functions such as cataloging and circulation.
- a method of networking to share resources.

Implementation

With the preparation and presentation of this statewide plan for the systematic development of technology in Oklahoma school library media centers, implementation has begun. In order to continue, a project director's position must be established within the Oklahoma State Department of Education. The director will be responsible for the development of the statewide database and the final production of the master disk. In carrying out these responsibilities, consideration must be given to the following:

1. Seeking participants
   --criteria for participation

2. Budget development
   --initial and ongoing costs
   --who is responsible for costs?

3. Technical issues
   --develop software and hardware specifications

4. Quality control guidelines
   --conversion of catalog and holdings data
   --ongoing maintenance

5. Current trends and future developments.

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AUTOMATION AT THE LOCAL LEVEL WORKSHOP

"School Library Automation: Solving the Puzzle"

A G E N D A

August 1990

WELCOME STATEWIDE PLAN AND DIRECTORY	10:00
AUTOMATION AT THE LOCAL LEVEL LEVELS OF SCHOOL LIBRARY MEDIA SERVICES	10:15
LONG RANGE PLAN Planning Functions of library automation Needs assessment	
L U N C H	11:30
LONG RANGE PLAN (cont.) Database Creation Software Selection Hardware Selection Installation Operation and Maintence	12:30
QUESTIONS AND DISCUSSION	2:15
DEVELOPING A STATEWIDE DATABASE	2:45

Presented by the Oklahoma State Department of Education, Library Resources/Technology Section and Building Level Library Media Specialists.

AUTOMATION AT THE LOCAL LEVEL WORKSHOP

"School Library Automation: Solving the Puzzle"

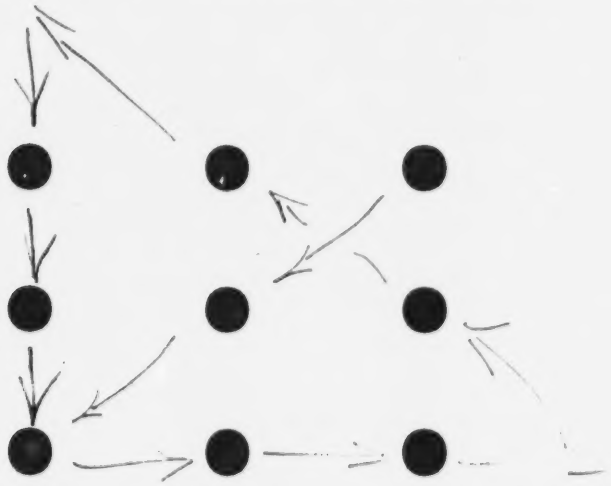
PRESENTATION OUTLINE

August, 1990

TIME	ITEM	VISUAL
10:00	WELCOME-Introductions, ice breaker, etc.	Cartoon A
	PLAN (Preface-Page 1-2)	TRA #1
	REGIONAL NETWORK & TASK FORCE	TRA #2
	PLAN (Page 3-5) AND DIRECTORY (Page 2-4)	TRA #3 TRA #4 TRA #5
10:15	AUTOMATION AT THE LOCAL LEVEL	TRA #6-7
	LEVELS OF SCHOOL LIBRARY MEDIA SERVICES	SLIDES
	LONG RANGE PLAN	TRA #8
	Planning	TRA #9
	Needs Assessment	TRA #10-15 Cartoon B
11:30	L U N C H	
12:30	LONG RANGE PLAN (cont.)	
	Database Creation	TRA #16
1:30	Software Selection	TRA #17
	Hardware Selection	TRA #18
	Installation	
	Operation and Maintence	
2:15	QUESTIONS AND DISCUSSION	Cartoon C
	REVIEW DIRECTORY	
2:45	DEVELOPING A STATEWIDE DATABASE	

CONNECT ALL NINE DOTS
WITH FOUR STRAIGHT LINES.
YOU MAY NOT LIFT THE WRITING
IMPLEMENT FROM THE
WRITING SURFACE.

THE SOLUTION IS NOT DIFFICULT AS LONG AS YOU DO NOT LIMIT YOURSELF TO THE AREA OF THE DOTS THEMSELVES.



THE SOLUTION REQUIRES YOU TO GO "OUTSIDE" THE DOTS.

THE PROBLEM MANY OF US HAVE IN DOING OUR WORK IS THINKING IN TERMS OF THE WAY THINGS HAVE ALWAYS BEEN DONE.

Automation of Oklahoma School Library Media Centers

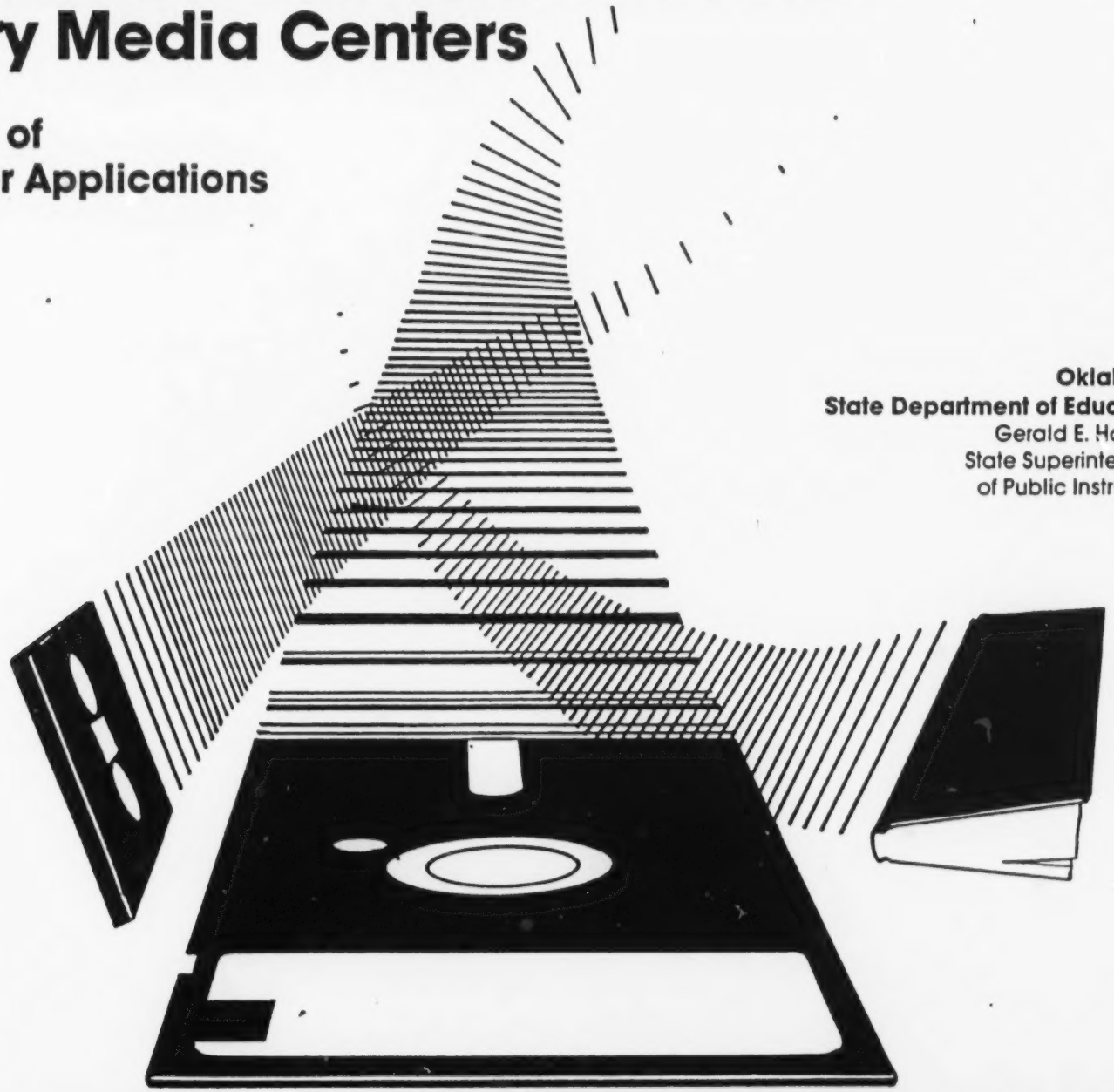
A Plan for the Development of Technology in Library Media Centers

Oklahoma
State Department of Education
Gerald E. Hoeltzel
State Superintendent
of Public Instruction

1990

Automation of Oklahoma School Library Media Centers

Directory of Computer Applications



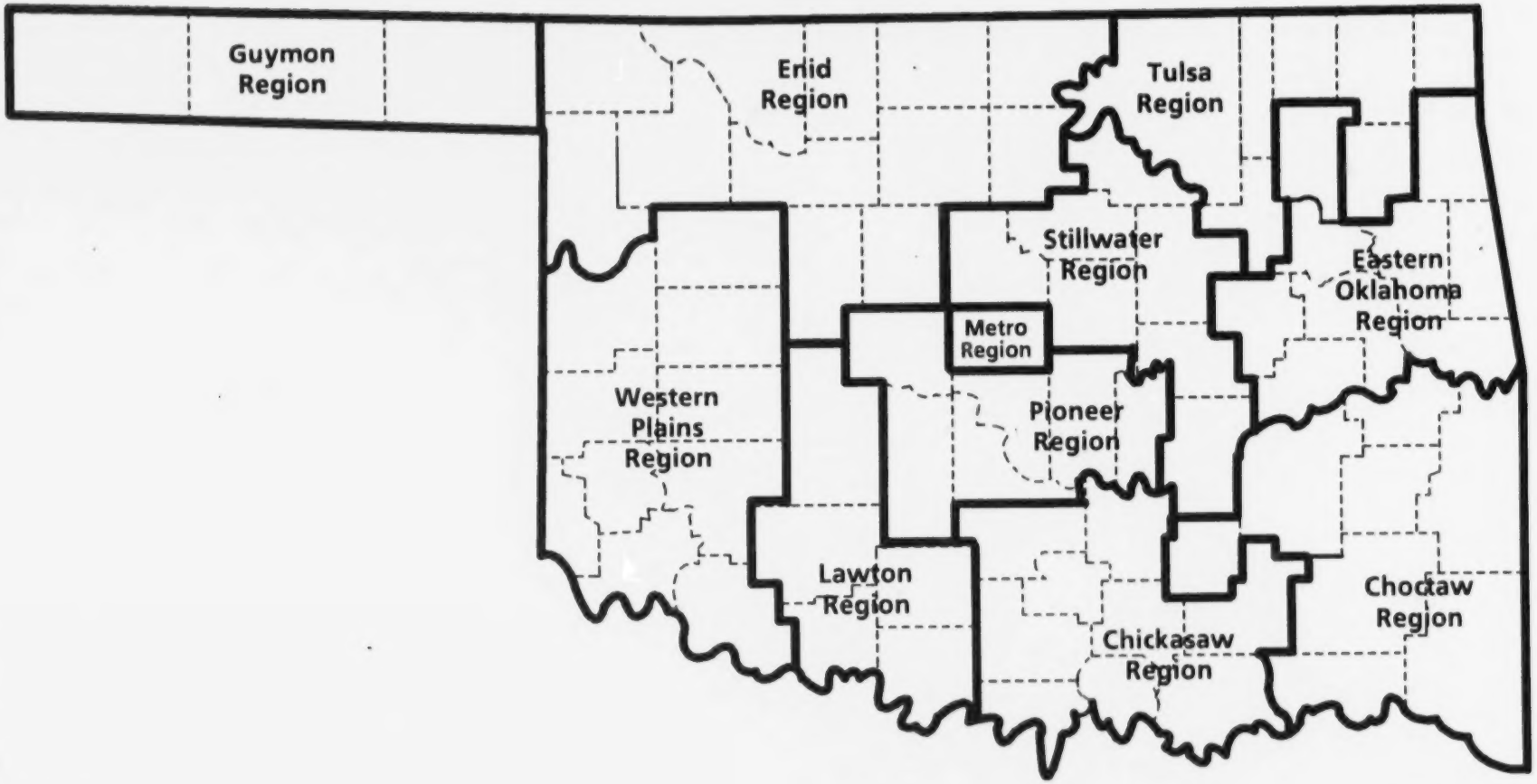
Oklahoma
State Department of Education
Gerald E. Hoeltzel
State Superintendent
of Public Instruction

1990

AUTOMATION REGIONS

REGION	COUNTIES
Guymon	Beaver, Cimarron, Texas
Enid	Alfalfa, Blaine, Ellis, Garfield, Grant, Harper, Kay, Kingfisher, Major, Noble, Woods, Woodward
Western Plains	Beckham, Custer, Dewey, Greer, Harmon, Jackson, Kiowa, Roger Mills, Tillman, Washita
Stillwater	Creek, Hughes, Lincoln, Logan, Okfuskee, Pawnee, Payne
Metropolitan	Oklahoma
Pioneer	Canadian, Cleveland, Grady, McClain, Pottawatomie, Seminole
Lawton	Caddo, Comanche, Cotton, Jefferson, Stephens
Chickasaw	Atoka, Bryan, Carter, Garvin, Johnston, Love, Marshall, Murray, Pontotoc
Tulsa	Craig, Mayes, Nowata, Osage, Ottawa, Tulsa, Washington
Eastern Oklahoma	Adair, Cherokee, Delaware, McIntosh, Muskogee, Okmulgee, Rogers, Sequoyah, Wagoner
Choctaw	Coal, Choctáw, Haskell, Latimer, LeFlore, McCurtain, Pittsburg, Pushmataha

AUTOMATION REGIONS



STATEWIDE AUTOMATION TASK FORCE

Task force members are:

Lou Nelson, Guymon High School

Pat Davis, Enid High School

Les Price, Southwestern Oklahoma State University

Karen Williams, Oklahoma State Department of Vocational/Technical Education

Carolyn O'Brien, Choctaw High School

Jerry Burris, Norman Central Mid-High School

Pat Kardaleff, Lincoln Elementary School, Lawton

Carolyn McElroy, Will Rogers Elementary, Ardmore

Barbara Rather, Tulsa Union

Kenie Tyrrell, Fort Gibson High School

Linda DeBerry, Idabel High School

CONCERNS CONFRONTING SCHOOL LIBRARY MEDIA CENTER IMPLEMENTING MICRO COMPUTER AUTOMATION

1. THE NATURE OF THE TECHNOLOGY . . .

2. THE NATURE OF THE MARKET PLACE . . .

3. THE NATURE OF SCHOOL LIBRARY MEDIA CENTERS . . .

AUTOMATION CONCERNS THAT CONFRONT ALL LIBRARIES

1. LIBRARY AUTOMATION IS DISRUPTIVE.

2. LIBRARY AUTOMATION TAKES TIME.

3. LIBRARY AUTOMATION IS COMPLEX.

4. LIBRARY AUTOMATION DEMANDS A COMMITMENT.

5. LIBRARY AUTOMATION REQUIRES CAREFUL PLANNING.

S L I D E P R E S E N T A T I O N

Levels of School Library Media Services

Level 1

General Description - The library exists as a separate and independant institution either by choice or by lack of any precedent for cooperation. Automation and technology are limited to traditional audio-visual materials and equipment to supplement the curriculum.

Characteristics - There has been no history of cooperation. Formal contacts have not been made between schools or other institutions. There may be no public library in the region. There are no library media personnel in the school or school system. There is no telephone in the school library media center. There are no satellite receivers or micro-computers in the school.

Level 2

General Description - Libraries are still quite independent entitites but experience sporadic cooperation. Some libraries may cooperate more than others but all still rely primarily on their own resources to satisfy user needs.

Characteristics - Assignment alerts are given to public librarians by the school library media specialist. Telephones are available in school library media centers for reference service by either school or public librarians. Joint publicity is used for special library events. A micro-computer is located in the school library and used for limited simple administrative task and classroom computer assisted instruction.

Level 3

General Description - Communication becomes more purposeful and on-going in nature, focusing on a specific event or issue. Library staffs may meet together on an irregular basis. Micro-computers in school library media centers are being used for circulation, administrative tasks, and student production (word processing, desktop publications, etc.). Isolated schools use satellite broadcasting to expand curriculum.

Characteristics - Class visits to the public library are scheduled. Public librarians visit the school library media center or school classrooms. Mutual planning and promotion of summer programs for children are planned. Contact between librarians is established through professional associations or workshops. Collections are inventoried and weeded. Shelf lists are updated to include the LC catalog number or the ISBN number. Instruction in the use of automation is integrated into the school's curriculum. Computers, televisions, satellite networks are purchased to meet demand. Facility renovations are made to accommodate new technologies.

Level 4

General Description - Mutual goals or objectives guide the cooperative activities of libraries. Though actual materials may not be exchanged, there is an increased awareness of the region's total information resources. Databases are developed. Patrons have access to automated catalogs. Library staffs and administrators have an understanding of the services and missions of the other libraries involved in the regional group.

Characteristics - Joint celebration of library events such as National Library Week are planned. Computerized databases of union list of periodicals and/or AV materials are developed. Bibliographies are exchanged. Cooperative data collection is initiated.

Level 5

General Description - Cooperation becomes more planned, systematic, and on-going as the commitment to expanded library service grows. Involvement of school administrators, town fiscal agents, trustees, etc. increases because many resource sharing activities involve policies or finances. Short- and long-range regional planning is occurring.

Characteristics - Shared story-telling, book talks, discussion groups, etc. are planned. Loan of school materials to public library during the summer is initiated. School library media materials are available to other schools and public libraries. Compatibility of hardware (video, microcomputer, etc.) throughout the region is sought. Shared display of special materials or projects is developed. Mutual exchange of materials of any kind and intradistrict delivery of the materials to all libraries and library media centers in the region is established. Regular articles in school or local newspapers, library bulletins, etc. are jointly planned and distributed.

Level 6

General Description - Cooperation exists on a frequent and regular basis and involves more people. Short- and long-term goals and objectives for library service are developed and approved by the appropriate governing boards. Libraries are fully automated and include on-line services.

Characteristics - Regioinal libraries and library media centers are involved in cooperative activities such as:

1. Collection development
2. Policy development (selection, weeding, equipment, etc.)
3. Joint cataloging/technical processing
4. Equipment repair, service or purchase program
5. Shared goal setting for library service within the region
6. Shared program evaluation procedures
7. Exchange of current acquisitions
8. Common automated catalog (CD-ROM, on-line database, etc.)

9. Facilities sharing for district patron services
10. Extended hours at the school library media center to increase patron access.

In Oklahoma, library media centers can be found at any place on this continuum. It is important for each library to determine through long range planning what is needed to assure future patron access to all information sources.

LEVELS OF SCHOOL LIBRARY MEDIA SERVICES

LEVEL 1 (NO INVOLVEMENT OR COOPERATION)

LEVEL 2 (INFORMAL COOPERATION)

LEVEL 3 (FORMAL COMMUNICATION)

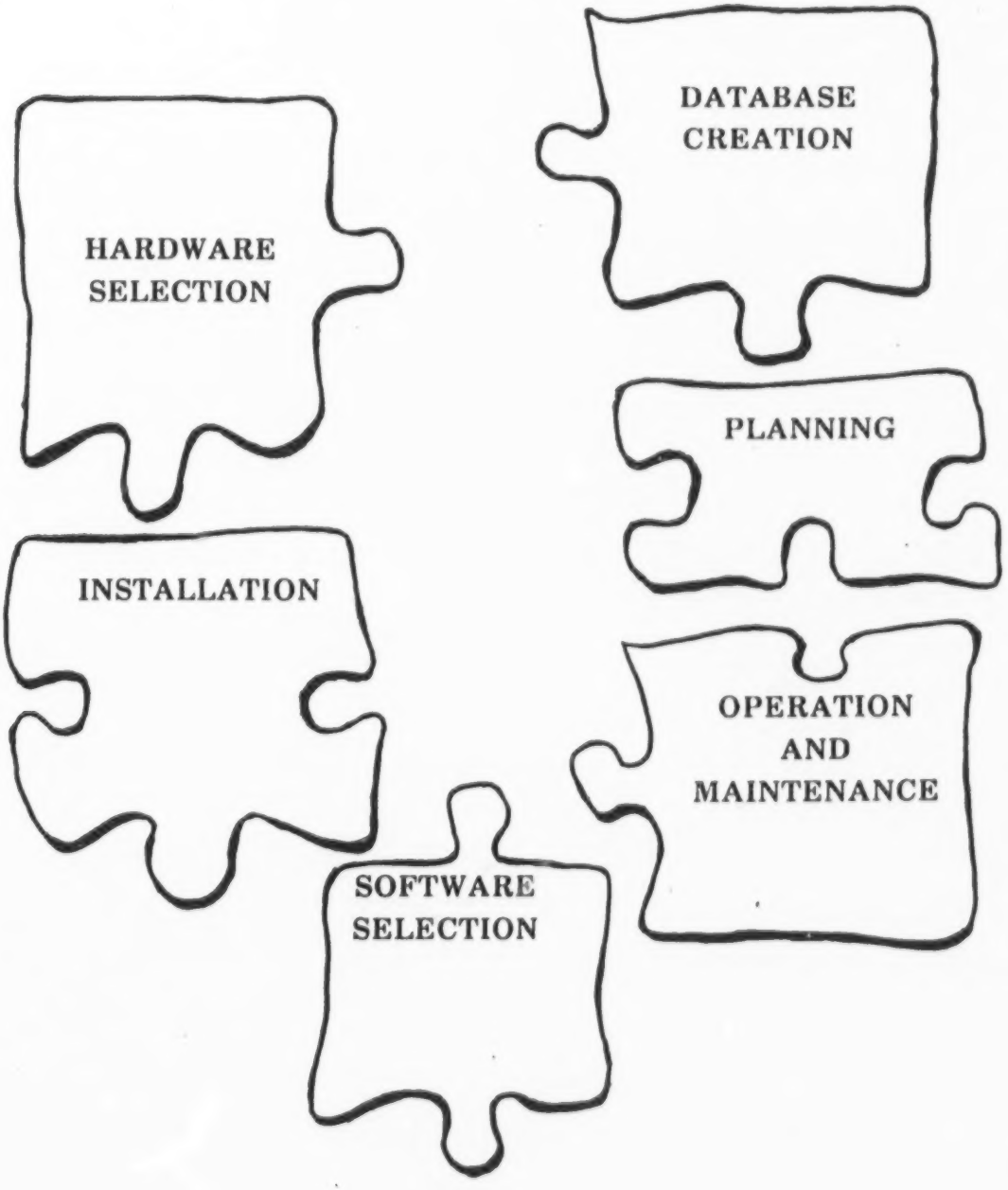
LEVEL 4 (FORMAL COOPERATION)

LEVEL 5 (RESOURCE SHARING)

LEVEL 6 (FORMAL PLANNING)

AUTOMATION AT THE LOCAL LEVEL WORKSHOP

"School Library Automation: Solving the Puzzle"



FUNCTIONS OF LIBRARY AUTOMATION –

LIBRARY MANAGEMENT

COLLECTION MANAGEMENT

INFORMATION MANAGEMENT

NEEDS ASSESSMENT –

Building-Level Media Center Profile

Patron Cluster

1. **Grade levels of patrons**

   P K 1 2 3 4 5 6 7 8 9 10 11 12

2. **Number of patrons**

   administrators _____ teachers _____

   students _____ support staff _____

3. **Anticipated changes in next 3 to 5 years**

   grade levels _____

   class size _____

   staff/curriculum _____

Staff Cluster

1. **Total FTE**

   professional staff _____ clerical staff _____

   volunteers _____ student aides _____

Collection Cluster

1. Number of volumes _____ periodical titles _____ AV titles _____

2. Number of new titles added per year _____

3. Anticipated changes in curriculum in the next 3 to 5 years:

Records/Reports

	FREQUENCY	ANNUAL TOTAL
1. Circulation reports	_____	_____
2. Accreditation reports	_____	_____
3. Overdue records	_____	_____
4. Budget reports	_____	_____
5. Consideration file	_____	_____
6. Inventory report	_____	_____
7. Schedules	_____	_____
8. Other _____	_____	_____

Service Cluster

1. Number of catalog searches per week _____

2. Number of interlibrary loan requests per week _____

3. Number of reference questions per week _____

4. Bibliographies completed annually _____

Special Considerations

1. Average time spent on the following tasks per week:

_____ student/teacher reserves

_____ circulation restrictions

_____ cataloging

_____ tracking lost books

_____ developing and revising lesson plans

_____/_____ maximum circulation per hour/per day

_____ student withdrawals

_____ generation of reports

From your long-range plan, (refer to page 7) list at least three major goals:

1.

2.

3.

List at least three major problem areas in your media center as determined by the profile:

1.

2.

3.

Based on goals listed, answer the following for each goal:

MAJOR GOAL	Can automation accomplish this task faster, more efficiently and more accurately?	Can automation aid patron access to information?	Can automation contribute to resource sharing?
1.			
2.			
3.			

If answers to the above are no, proceed to the next section on database creation. If the questions indicate a need for automation, consider the following:

MAJOR GOAL	Is there considerable repetitive work involved?	Is speed important?	Is accuracy important?
1.			
2.			
3.			

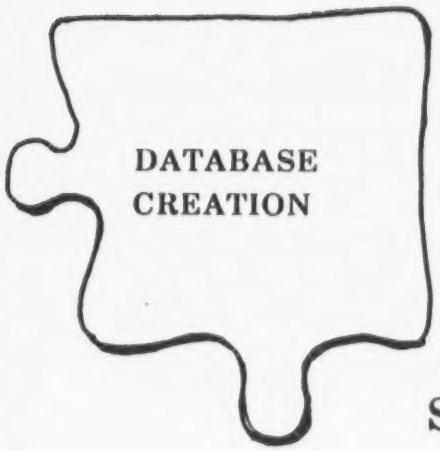
Based on problems listed, answer the following for each problem:

MAJOR PROBLEM	Can automation accomplish this task faster, more efficiently and more accurately?	Can automatioh aid patron access to information?	Can automation contribute to resource sharing?
1.			
2.			
3.			

If answers to the above are no, proceed to the next section on database creation. If the questions indicate a need for automation, consider the following:

MAJOR PROBLEM	Is there considerable repetitive work involved?	Is speed important?	Is accuracy important?
1.			
2.			
3.			

"HIT ANY KEY TO CONTINUE"



STANDARDIZATION

WEEDING

INVENTORY AND SHELF LIFT

RETROSPECTIVE CONVERSION

SOFTWARE INVESTIGATION

REQUEST FOR INFORMATION

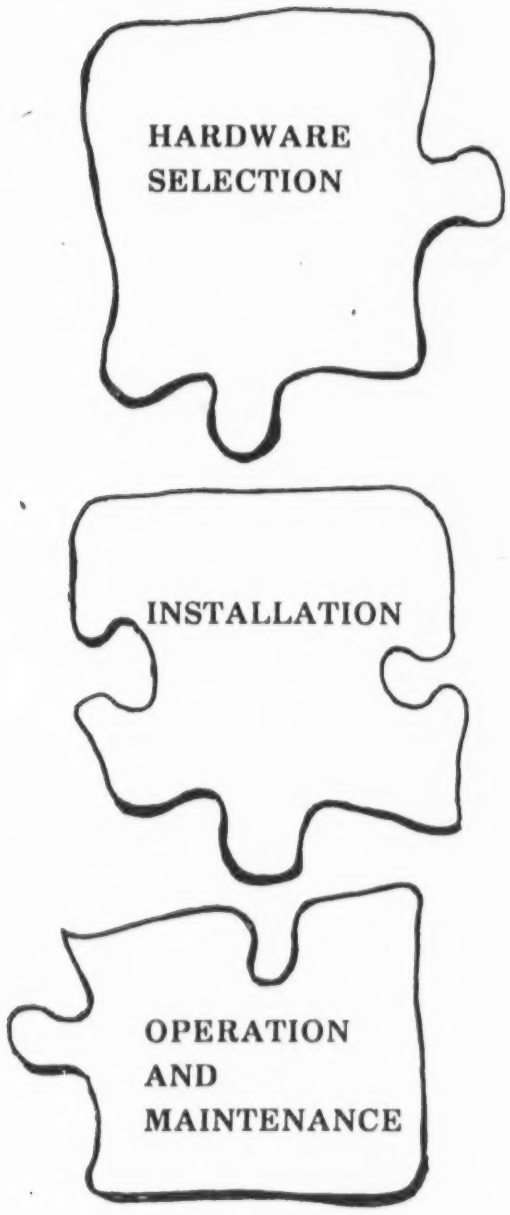
SYSTEM REQUIREMENTS . . .

FUNDING

REQUEST FOR PROPOSAL

ON-SITE VISITS

D E C I S I O N !


HARDWARE
SELECTION
INSTALLATION
OPERATION
AND
MAINTENANCE

TO ERR is HUMAN...

TO REALLY SCREW THINGS UP, YOU NEED a COMPUTER!!

BEST COPY AVAILABLE